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Report number T09.25024.04

Sponsor:

Contractor, manufacturer : Unifloor Underlay Systems B.V.
Product name/family : Product Family 4, see appendix I, page five.

Purpose :

Classification accordance EN 13501:2007.

Reaction to fire test, according to:

- EN ISO 11925-2:2002 Reaction to fire tests for building products, Part 2:
Ignitability when subjected to direct impingement of flame (ISO 11925-2:2002).
- EN ISO 9239 reaction to fire tests for floor coverings, Part 1: Determination of the
burning behaviour using a radiant heat source (ISO 9239-1:2002).

Results:

On pages two up to and including four.

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17 February 2010

Project number
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Article
Product Family 04

Appendices
1, page 5

TQS applies the Standard Conditions for
research instructions given to TNO. The
Standard Conditions will be sent on request



Date
17 February 2010

Project number
T09.25024

Article
Product Family 04

Page
2 of 5

Test results: EN-ISO 11925-2:2002 Small burner examination

Date of test	: October-November 2009
Conditioning time, climate	: min. 3 days, 23 ± 2 °C and 50 ± 5 %
Description of substrate	: 6 mm. Fibre cement board, 1800 kg/m^3 .
Flame application	: Surface.
Application time	: 15 seconds.

Assessment:

FAMILY 4 under flooring, fulfilled the requirements EN ISO 11925-2¹ ($F_s \leq 150 \text{ mm}$ within 20 s.).

Based on the test results and evaluating the criteria for classification according to clause 8 of the EN-ISO 11925-2:2002 the examined **FAMILY 4** under flooring proved to be capable of resisting, for a short period, a small flame attack without substantial flame spread.

If assessed according to Table 1 of the European classification standard EN 13501-1:2002 "**Classification standard for building product and building elements**" the examined product will be classified as follows: **Class E_n**.

¹ Under conditions of surface flame attack and, if appropriate to the end-use application of the product, edge flame attack.



Date
17 February 2010

Project number
T09.25024

Article
Product Family 04

Page
3 of 5

Test results: EN ISO 9239-1:2002. Radiant Panel test.

Date of testing : October-November 2009
Conditioning time, climate : min. 3 days, 23 ± 2 °C and 50 ± 5 %
Description of substrate : 6 mm. Fibre cement board, 1800 kg/m^3 .
Sampling procedure : by contractor.
Description of cleaning used : none
Fixing method : loose laid

Quality	Test specimen, orientation	CRF (kW/m^2)	Smoke production (%.min)
Redupanel	longitude	4.91	22
TS Floor	longitude	3.89	55
TS Floor	longitude	4.20	31

Table 1: A list of radiant panel test results (EN-ISO 9239-1) from qualities of the Family of Products 4

Remarks: no flashing, transitory- or sustained flaming,
* specimen extinguished naturally

Classification criteria Class D_{FL} Additional classification: **s1**:

- Critical flux (CRF) $\geq 3.00 \text{ kW.m}^2$.
- Smoke production, Smoke $\leq 750 \text{ \%} \cdot \text{Min}^{-1}$.



Date
17 February 2010

Project number
T09.25024

Article
Product Family 04

Page
4 of 5

Conclusion:

According to EN 13501:2007 the tested samples of the aforementioned **Family 4** meets the requirements of **Class D_{FL} - s1**

Statements:

The test results only relate to the behaviour of the test specimens of the examined product under the particular conditions of the test in laboratory conditions; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use. The method might not be suitable if the product is exposed to much larger flames or heat radiant sources.

The validity of this report will expire five years after its issue or directly after alterations or modifications of the examined product(combination)(s) and/or the criteria. This report shall not be reproduced, except in full, without the written approval of the testing laboratory.

Project leader:

Mr. J. Brinks

Author:

Mrs. I. Pierik

A handwritten signature in black ink, appearing to be 'I. Pierik', is written over a horizontal line. Below the signature, the letters 'ba.' are handwritten.

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Date
17 February 2010

Project number
T09.25024

Article
Product Family 04

Page
5 of 5

APPENDIX I: PRODUCT FAMILY 4, description of samples

Description of sample:

Type of surface : underlayment/underflooring

Quality	Total mass	Total thickness
	kg/m ²	mm
Redupanel		25
TS Floor	14.5	25